| | Application No. | Applicant(s) | |
|---|---|---|---|
| ***Notice of Allowability*** | 10/634,616 | FRANZ ET AL. | |
| | Examiner | Art Unit | |
| | Josiah Hernandez | 2626 | |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _08/04/2003_.

2. ☒ The allowed claim(s) is/are _1,3-10,14,15,17-24,28-30,32,33 and 35-37_.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All    b) ☐ Some*    c) ☐ None  of the:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the
         International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
      Paper No./Mail Date _____ .

    **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

## *Response to Amendment*

1.      In response to the office Action filed August 7, 2007, applicant has submitted an

Amendment, filed November 8, 2007 canceling claims 2, 11-13, 16, 25-27, 31, and 34.

Applicant has also amended independent claims 1, 15, 30, 33 and 37, reciting

calculating an overall probability for ones of the set of languages classes by evaluating

the probability for ones of the set of language classes by evaluating the probability for

the document properties set based on the attribute model and the probability for the

byte occurrences based on the text model.

## EXAMINER'S AMENDMENT

2.      An examiner's amendment to the record appears below. Authorization for this

examiner's amendment was given in a telephone interview with Robert R. Sachs on

January 17, 2008.

The Independent claims 1, 15, and 30 have been amended to state the following:

A system for identifying language attributes through probabilistic analysis, comprising:
    a storage system adapted to store a set of language classes, which each identify a
        language and a character set encoding, and further adapted to store a plurality
        of training documents;
    an attribute modeler adapted to train an attribute model by evaluating occurrences of
        one or more document properties within the training documents and, for each

language class, calculating a probability for [[the]] <u>a set of the one or more</u> document properties, [[set]] <u>the probability</u> conditioned on the occurrence of the language class, the trained attribute model stored in the storage; <u>wherein the document properties comprise at least one of top level domain, HTTP content character set encoding and language header parameters, and HTML content character set encoding and language metatags;</u>

a text modeler adapted to train a text model by evaluating byte occurrences within the training documents and, for each language class, calculating a probability for [[the]] <u>a set of</u> byte occurrences, <u>the probability</u> conditioned on the occurrence of the language class, the trained text model stored in the storage; and

a training engine adapted to calculate an overall probability for [[ones]] <u>at least one</u> of the set of language classes by evaluating the probability for the document properties set based on the attribute model and the probability for the byte occurrences based on the text model.

## *Allowable Subject Matter*

3.     Claims 1, 3-10, 14-15, 17-24, 28-30, 32-33, and 35-37 are allowed.

4.     The following is an examiner's statement of reasons for allowance:

As to claims 1, 15, 30, 33, and 37, there is no prior art reference, alone or in combination, that teaches or fairly suggests evaluating  occurrences of one or more document properties within the training documents and, for each language class,

calculating a probability for the document properties; wherein the document properties

comprise at least one of top level domain, HTTP content character set encoding and

language header parameters, and HTML content character set encoding and language

metatags.

Bracewell et al. (US PGPUB 2006/0041685) teaches that document properties

like HTTP header information can be used in order to identify the language of a

document or search query on the internet (paragraph [0014]). However, none teach or

suggest using the document information such as: top level domain, HTTP content

character set encoding and language header parameters, and HTML content character

set encoding and language metatags, in order to calculate the occurrences of that

specific property and further calculating probabilities from the occurrences of the

properties that can be directly associated to a particular language and be used as part

of a language model in order to identify the language of the document.

Claims 3-10, 14, 17-24, 28, 29, 32, 35, and 36 are allowed because they further

limit their parent claims, which are allowed.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee.  Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

## *Conclusion*

A note has been made to notify the appropriate parties that the examiner has moved from Art Unit 2609 to 2626.

Any inquiry concerning this communication should be directed to Josiah Hernandez whose telephone number is 571-270-1646. The examiner can normally be reached from 7:30 pm to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JH

DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
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